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**National Research
and Development Policy
of the Czech Republic
for 2004–2008**



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I. PREAMBLE

- [1] The National Research and Development Policy of the Czech Republic (hereinafter referred to as NR&DP) formulates the relation of our state to research and development (R&D) in the middle term perspective. The policy implies the principles of the Government towards the area of R&D, from which the state administration starts at implementation of measures concerning this area. It is intended for ministries and other administration bodies and their employees as a starting point for preparation of sectoral R&D concepts and gradual fulfilment of individual objectives and support of priorities of these concepts. At the same time it provides institutions, organisations and R&D workers the general information for strategic decision making or drafting and follow up implementation of their plans in research activity or other research (including infrastructure), development, as well as innovations and other R&D related fields. The national policy serves also as source groundwork for preparation of regional R&D concepts.
- [2] NR&DP makes advantage of the analysis of evaluation of fulfilment of the national policy of 2000, impact of research and development on the competitiveness and overview of the research and development evaluation in the Czech Republic in foreign documents. These aspects have been described in detail in the document named Analysis of the previous trends and existing state of research and development in the Czech Republic and a comparison with the situation abroad (hereinafter referred to as the Analysis). The National Research and Development Policy in the Czech Republic for 2004–2008 is based upon this document.
- [3] NR&DP is as well the set of information for the OECD and EU bodies and implies the level of readiness for international cooperation and extent of compliance of R&D priorities and targets of administrative and other authorities and institutions managing or administering the sector of research and development in the Czech Republic with similar institutions in abroad, particularly within the European Research Area (ERA).

I.1. The importance of research and development for society, the importance of integration to EU for research and development

- [4] The R&D policy is a standard part of the integrated system of national policies concerning main areas of the society functioning in most of the advanced countries; particularly the interrelation of the R&D policy with the education and innovation policy, policy of employment, informational policy, policy of industry and trade and other sectors. In the European Union countries the mutual compatibility and interconnection of these policies is being deepened. Within the European Research Area covering both member and candidate countries, the national R&D policies are being mutually interconnected, including their relations to other national policies.
- [5] In connection with the planned accession of the Czech Republic to EU our country envisages the full embodiment into the system of interrelated national R&D policies and related areas (education, innovations, business activities, employment, economy and others). This system integration implied by the Lisbon strategy pursues the following main impacts on the society:

- consolidation and unification of economic conditions (including demands on research and qualification enhancement),
 - stimulation for creation, diffusion, absorption, extension and utilisation of knowledge (including intensification of cooperation inside the research and innovation area in Europe, support of innovative business activities and support of investment into human resources),
 - improvement of working conditions and social certainties (including improvement of quality of life, employment and equal opportunities in research and development).
- [6] With its integration into ERA the Czech Republic is requested to take over certain methodological procedures serving for preparation and monitoring of the national R&D policies (taking over procedures within the Open method of coordination, benchmarking, establishment of information system, determination of R&D priorities by sophisticated procedures, and preparation, analysis and evaluation of research programmes), as well as their implementation (interconnection of national and framework programmes). Fulfilment of these methodological requirements should enable to reach the main conceptual targets of the national policy for research and development and its successful implementation.

I.2. The Czech research within context of the Lisbon strategy and Barcelona objectives

- [7] There are no doubts that the Lisbon strategy belongs among the most important external factors influencing the formulation of the national R&D policy of the Czech Republic being the candidate country at the accession door to EU. This strategy was announced on the Lisbon European Council on March 23–24, 2000. It is aimed at creation of world-wide highly competitive economy within EU based on the society of knowledge and capable of steady growth at simultaneous creation of new jobs. The research supported from the state and private funds is the key factor at creation of new knowledge and plays a fundamental role at transition to an economy based on the society of knowledge. The objectives of this strategy and partial processes of its implementation were expressed in conclusions of the Barcelona European Council on May 15–16, 2002. Then on the grounds of the Lisbon strategy and Barcelona objectives the European Commission presented an action plan to the European Council on March 2003 (hereinafter referred to as the Action Plan for Europe – see the submission report) for removal of the main weaknesses of research and development in the European countries. These weaknesses being understood as cause of hesitancy of investors to support research and development are common to all member and candidate countries of EU; the Czech Republic is no exception. Among the typical weak points are the shortages and low flexibility of the professional career of the researchers driving out the top workers to abroad, as well as fragmentation and small distinguishability of the excellent research and problems faced by the top technological small and medium sized companies at obtaining the support for their research and innovations. And last, but not least weak point is the deficient knowledge of the research workers and managers in the area of intellectual property and putting of the R&D results into practice. A range of measures resulting from the Action Plan for Europe was used also at preparation of the National Research and Development Policy of the Czech Republic for 2004–2008.

- [8] The implementation of the Lisbon strategy is connected particularly with one of the most difficult of the Barcelona objectives: to ensure the R&D support in the European Union in the amount of 3 per cent of GDP by 2010, of this 1 per cent should come from the public funds.
- [9] The EU demands on realisation of the Barcelona objectives become actual in the time when the Czech Republic is coming through the public finance reform related with the state budget restrictions in the middle term horizon, including the research and development. The aim is to fulfil the tasks of the EU Development and Stability Pact, i. e. reduction of budget deficits and public indebtedness. This is followed by the need to formulate the principles of the national research and development policy of the Czech Republic in an entirely new, difficult and hardly foreseeable environment of a moderate growth in the public expenditures for this sector in the three years' horizon, with perspective of increasing the public funds in the next period. These conditions substantially differ from those of the past period when very specific and scheduled increase in the R&D funds was estimated. Therefore it is an important task of this national policy to consolidate ambitions and necessary strategic objectives of the Czech research and development in the context of Barcelona objectives with the reality of the public support of research and development maintained at present amount.
- [10] If the increase in the R&D public expenditures keeps the present pace also after 2006, it will be very difficult to fulfil those of Barcelona objectives that are connected with the mentioned public funds growth to 1 per cent of GDP by 2010. This concerns particularly the fulfilment of new tasks, so far not financially provided for, connected with the increase of public expenditures for research and development and their infrastructure, and in certain extent the support of the private research and development by a share method (part of expenditures is covered from the public funds and the rest from the private funds). But on the other hand the support of private investments into research and development by creation of suitable framework conditions may influence substantially the fulfilment of Barcelona objectives in the area of non-state funding.(increase in non-public expenditures to 2 per cent of GDP by 2010). The extent of development of some forms of the indirect support to research and development, especially those that may result in reduction of the direct support, is also influenced by the current financial policy within the public finance reform being in progress. Therefore in the area of the indirect support it is possible only to propose possible measures that will be implemented eventually under situation favourable for introduction of tax allowances for research and development.

II. PRIORITIES AND OBJECTIVES FOR THE CZECH REPUBLIC

- [11] Even despite the present efforts to reduce the public budgets deficit the Czech Republic professes to the Lisbon strategy. Therefore the primary general objective of NR&DP is to contribute to creation of the economically highly competitive society at maintenance of the social cohesion.
- [12] Under Act No. 130/2002 Coll. on R&D support the priorities of research and development are implemented through the National Research Programme. The National Research Programme will not end until 2009 and is governed by the 2000 national policy priorities.

This national policy determines the priorities from which the individual thematic parts of the National Research Programme II (NRP II) started in 2006 will be processed. The system priorities given by this national policy will be taken into account at preparation of the cross-sectional programmes of NRP II. Following areas were selected as the system priorities for the period of this national policy:

- human resources,
- international cooperation in R&D,
- regional aspects of R&D¹,
- utilisation of R&D results in practice,
- evaluation of research.

- [13] The priority thematic areas for NRP II were determined by the technology foresight method². The thematic contents of individual parts of NPV II will be selected from the following circles:

- safe, reliable and ecological energetics for the future,
- society of information and knowledge,
- quality and safety of life,
- new materials and technologies,
- needs of the Czech Republic in the social and economic area.

- [14] The thematic circles mentioned in the previous paragraph represent sets of 27 priority themes. The number of themes will be narrowed during the preparation of NRP II to approximately 15, of which the individual parts of the national programme will be drawn up (three thematic programmes are envisaged). The proposal of the structure of the priority themes is given in more details in annex to this national policy.
- [15] The emphasis at realisation of priorities is put on the practical applicability of R&D results for these results to assist at solving the needs of the Czech Republic citizens, improving level of their life and enabling them the orientation and flexibility in the dynamically developing social environment strongly influenced by the integration processes.
- [16] The selection of the national thematic priorities of research and development will be updated in cooperation with preparation of another national programme according to the economic outlook and social needs of the society to support the research directions having the highest potential to contribute to the economic development of the Czech Republic, its sustainability and quality of life of its citizens.
- [17] For solution of the above mentioned issues the activities of those professional work sites will be supported that will be engaged in studies in a qualified way with the aim to

¹ Although the regional aspects belong systemically into part II, because of their material nature they were included into part IV.2 describing among others also the organizational structure of research and development.

² The priority thematic circles were prepared by the technology foresight method on the ground of order of the Ministry of Education, Youth and Sport placed to the Technological Centre of Academy of Sciences of the Czech Republic that cooperated with the Centre for Social and Economic Strategy at the Charles University. Several dozens of experts from the sectors of research and state administration and the user sphere participated through the panel discussions in preparation of the priority themes. At determination of priorities the necessity to maintain the thematic continuity between the National Research Programme and NRP II was taken into account, while stressing the compatibility of the national programme with the EU framework programme.

prepare the groundwork for identification of national R&D priorities and development of the foresight methodology as a systematic process resulting in information serving as ground for the strategic management.

- [18] By their orientation and priorities the departmental research programmes complement the National Research Programme according to the needs identified by individual providers and the principle of optimum utilisation of public funds allocated to R&D area in favour of the society.

II.1. The evaluation of research and development

- [19] NR&DP responses to the growing importance of the evaluation of research on all levels in all advanced countries. At the same time it must struggle with the fact that the evaluation represents highly complicated and demanding activities necessary to be realised throughout the area of research and development on a high level and according to a single methodology.
- [20] The system of research evaluation in the Czech Republic will respect the global trends and employ new knowledge and best practice of research evaluation from the individual member countries of EU, or OECD respectively. Fundamental principals of evaluation will be the multicriterial approach, demonstrable professional competency, factuality, transparency, independence and objectivity.
- [21] In the next period crucial will be particularly the higher quality of:
- a) the continuous evaluation of the process of implementation of NR&DP and its successfulness at desirable increase in the overall performance of the Czech research and development,
 - b) the process of evaluation of the research results as an instrument of policy serving for more effective allocation of public funds to individual programmes, projects, and institutions.

II.1.1. The evaluation of NR&DP implementation

- [22] At evaluation of implementation of the presented NR&DP all results and experiences made so far will be utilised; but further intensification in the implementation, communication and methodological area is expected. An increased attention will be given to the responsibility for fulfilment of the policy-related tasks (analysis of reasons of any failure, measures taken for the remedy), analysis of surviving problems and assessment of efficiency of individual policy instruments and their application under the given conditions. More independent professionals will become involved in the policy evaluation and its results will be presented to the broad public discussion. On the basis of the results of evaluation the Ministry of Education, Youth and Sport will consider any proposal of updating to the applicable national policy. Regarding the need to integrate to EU as a competitive member the indicators and evaluation instruments used in EU will be taken over. The results of evaluation of NR&DP implementation will become part of the analytical groundwork for preparation of the subsequent national policy.

II.1.2. The evaluation of programmes and projects

- [23] At evaluation of the results of a research NR&DP puts emphasis on their originality, contribution to the overall knowledge, innovation and application benefits (with a view to specifics of the individual types of research) and to the whole range of social functions and effects of research for the economy, society, education and knowledge.
- [24] A balanced attention will be given to the improvement of processes of both the ex ante evaluation of draft research programmes and projects and the ex post evaluation that would demonstrate more deeply the actual quality and benefits of a solution and purposefulness of the public funds spent. The best evaluation of programmes and projects requires a clear determination of research objectives and creation of a system of suitable and adequate criteria for the given type of research. During evaluation a due attention will be given to the feasibility criteria.
- [25] The evaluation of programmes (National Research Programme, departmental programmes) is based upon evaluation (thematic, cross-sectional and partial programmes) summarising the expected, continuous and final results (economic, social, and others) of the particular included projects. During solution and after termination of all projects included in the programme the evaluation reports will be submitted to the government, including estimate of effectiveness of the financial means spent, by a particular provider or coordinator (e. g. for the National Research Programme).
- [26] At evaluation of projects the whole evaluation scale will be used for a reasonable differentiation in quality and successfulness of solution between individual projects and mineralization of a formal approach of the evaluators. The importance of the ex post evaluation will be increased to become not only the audit of allowable cost regardless of the results of the project solution. The results and knowledge of the ex post evaluations will serve as a feedback for future decision-taking on selection of projects and their investigators. The R&D information system will include relevant information on results of projects after the evaluation is ended. Desirable is also to reach the necessary consensus at perception of what is a successful project and what is not.
- [27] The evaluation results (with emphasis given to the results of a long-term repeated evaluation) will become the decisive criterion for allocation of disposable financial means. Preferred will be those who are reaching better results in the long term.
- [28] With the aim to reach an overall higher quality of research evaluation the procedures used in the advanced countries will be analysed and selected methodologies and indicators applied to our conditions. The Czech Republic will become more involved in the international system of evaluation and benchmarking will be applied to a greater range. Processed will be also the case studies on the “fate” of selected projects and research results. On general, it will be very desirable to increase the overall evaluation culture. At the same time the development of the professional base for the area of evaluation will be supported, as well as other relevant issues of the research policy.

II.1.3. The evaluation of research institutions and individuals

- [29] All research institutions spending institutional funds will be regularly thoroughly evaluated by providers of these institutional funds, or by their establishers, with

participation of foreign experts and representatives of the central bodies of the state administration. At their evaluation it is reasonable to dedicate attention not only to the effective spending of the obtained public funds, but also to the ability of these institutions to obtain and increase the value of the private funds on the basis of their results.

- [30] The evaluation of individual research workers is particularly the internal matter of development of the research institutions themselves. To be efficient, at first it must have the all-round motivational character and evaluation must be connected with the career order and made on regular basis. Besides the quality of the research work itself, beyond dispute being the most important criterion, also the engagement in international research projects and teams will be evaluated. Besides the publication activity (evaluated by prestige of particular periodicals and publishers) the application outcomes (patents, etc.) from the private sphere will gain increased importance. The results of evaluation will be used by particular providers as a significant groundwork for determination of the overall amount of the institutional support.

II.2. Human resources

- [31] The available human resources are the basic condition of such level of R&D development allowing for both the increasing of competitiveness of the Czech economy and faster modernisation and cultivation of the whole Czech society as a necessary condition for its transition to the society of knowledge.
- [32] The system of education in research and development based on the postdoctorand and other timely limited jobs may not acquit itself in the Czech Republic (unlike the United States where most postdoctorands find their later work in industry or in other spheres) until building of a competitive industrial base and increase in the international competitiveness of the younger R&D workers.
- [33] The present state is characterised by a relatively high age average of R&D workers and absence of not only young, but particularly high quality middle generation. For development of human resources for the area of research and development it is necessary to use fully also the capacity of universities being active outside the capital and support building of regional research and development potential.
- [34] The importance of mobility grows up because the science becomes more and more a global matter. The mobility of research workers will be supported also by the state, both inside institutions and between various worksites inside the country and on the supranational scene. Besides advertising the programmes or parts of programmes supporting migration (e. g. by form of covering the cost of stays of the Czech scientists in abroad and in turn foreign scientists in the Czech Republic) the migration will be supported also within the EU programmes.
- [35] The organisations and institutions of research and development must be seriously concerned with creation of such working and material conditions for the Czech research to become attractive for students and scientists working in abroad. Specific measures will be extended, e. g. the “bridging grants“, which facilitate to research workers under a short contract the change back to domestic institutions. The outflow of our workers may be to a certain extent compensated by searching and importing the talents from abroad.

The increase in competitiveness should be assisted by legislative changes supporting the intensity of migration of scientists comparable with the EU countries.

- [36] In compliance with documents of European Commission and European Parliament and tasks for the EU member countries to enforce the engagement of women in research and development.
- [37] The basic priority is the provision of sufficient material conditions of skilled R&D workers, and students of doctoral study programmes. Other priorities are the improvement of prestige of research and development to increase the interest of young people in activity in this area. At the same time the interest of young people in research and development will be supported by a reasonable form on elementary and secondary schools.

II.3. The international cooperation

- [38] The boosting of the broad interdepartmental research may be supported by integration of the Czech R&D sites into the international cooperation, particularly into the European networks of research organisations.. The possibility of involvement of the Czech research teams and institutions in the international cooperation should not be an alternative to cooperation between domestic subjects in the area of research and development, but rather an enlargement of the research and development activity with the aim to get at devices, technologies, processes, methodologies and infrastructure that are available in the Czech Republic only with difficulties or not at all. The emphasis will be put on the fact that integration of the Czech research and development into international structures must not lead to any undesirable fragmentation of the already built domestic research and other associations.
- [39] The submitted R&D policy reacts to the opportunities and risks of globalisation among others also by support of integration of R&D subjects from the Czech Republic into international structures and removal of barriers for mobility of the research workers. The R&D policy will support the increase of economic motivation of the skilled experts to work in research and development in the Czech Republic.
- [40] The pace of changes in the globalising world gets higher. The maintenance or even improvement of position in the group of advanced countries requires quick and effective adaptation to these changes, including the area of cooperation in research and development.
- [41] The integration of the Czech research and development into the European Research Area is one of the opportunities how to face the risks of globalisation. After its accession to EU the Czech Republic will be forced, besides utilisation of the indisputable advantages of the open market, to face the competition pressure of the advanced European economies. The future of our research depends beyond dispute on the ability to gain new knowledge quickly and effectively and apply them in the products being competitive on the demanding markets.
- [42] The criterion for establishment and development of the international cooperation in research and development will become its benefit for the society, economy, but also for the R&D system (connection into networks, improvement of quality of the young research workers preparation, support of women participation in research and development,

relation between research and development and society, and others), more effective attainment of results of the basic research, etc. The foreign documents, including the EU materials, mention this criterion under the term of an added value.

- [43] All international co-operations arranged on the governmental level and prepared co-operations, as well as participation in the non-governmental organisations, will be evaluated based on the value added criterion.
- [44] The utilisation of national and foreign R&D financial resources will be harmonised to create the highest added value at their present utilisation. According to the actual financial possibilities the national co-financing of research cost will apply particularly if being condition for granting of the foreign financial resources.
- [45] The involvement of the Czech Republic in the EU framework programmes and full participation of Czech subjects on these programmes opens a chance to receive a considerable added value. The successfulness of involvement in the mentioned programmes will not be evaluated only by the participation itself, but on the basis of the attained results and benefits for the Czech Republic as well.
- [46] For making use of these chances the information and consulting services will be strengthened for subjects applying for participation in the EU framework programmes. It is believed as reasonable to support also the phase of filing the draft project into the framework programmes. The usefulness of the R&D infrastructure support – National contact organisation and departmental and regional contact organisations for the EU framework programmes – was proved This infrastructure will be further supported and developed.
- [47] In the area of cooperation with states not being members of EU (third countries) the cooperation will be supported with all states with established traditional contacts based on the mutual benefits.

The accession to EU represents a challenge for the Czech Republic and opportunity for development in all areas. The area of research and development in the European Union and member states is being subject of a special interest as a guarantee of improvement of the quality of life (in the most general sense of the word) and condition for increase in the competitiveness of Europe towards the rest of the world. The area of research and development is expressly mentioned in the Treaty establishing the European Union, in the Amsterdam version, in Articles 163 to 173. In spite of our country participating in the framework programmes (in various stages of accession) already from 1993, the 5th and particularly 6th framework programme already with rights and duties that do not differ in fact from the rights and duties of the member states, the accession to EU will bring new tasks, while somehow changing the external conditions. This change relates mostly with the possibility to influence the events already from the very beginning, including proposals and formulation of the framework programmes, proposals and coordination of the large international R&D projects and their evaluation.

II.4. The utilisation of R&D results in practice

- [49] The Czech Republic will consider the possibilities to introduce the measures for supporting the new firms, the existence of which depends on the research solution

(*spin-off* firms) requiring the cooperation of numerous state and private institutions. The measures are particularly as follows:

- to introduce, or strengthen, as the case may be, the financial support of research and development of the newly emerging firms,
- to create “more friendly” entrepreneurial climate,
- to enlarge the number of entrepreneurial incubators, particularly at academic institutions,
- to improve knowledge of the scientific community on the conditions of business activities, e. g. by introduction of special educational programmes,
- to establish bodies on the level of institutions (Academy of Sciences, universities) capable of providing a professional support to persons interested in establishment of a spin-off firm,
- to adapt conditions, under which R&D institutions may carry on an extra activity, on the level customary in the advanced countries.

- [50] The fulfilment of objectives of the Lisbon strategy is a great challenge to the Czech Republic. If the Czech Republic is to become part of the most progressive and competitive European economy by 2010, it is necessary to increase significantly the efficiency of processes leading to implementation of results and support everything leading to that implementation as a priority. Therefore the matter of importance is the support of chairmanship of the Czech Republic in the EUREKA programme in 2005–2006.
- [51] The utilisation of the intellectual property, e. g. filing of patents, may be stimulated by suitable setting of the evaluation criteria for all types of research leading in the short or longer horizon to any practical application. An important role will be played also by the newly launched National Research Programme. After the possibility to finance the patent agenda within the public support of research and development was provided by Act 130/2002 Coll. on R&D support it is necessary to take other measures, for example to improve the legislation in the area of the copyright protection.
- [52] The basic research is the source of knowledge and necessary and often fundamental information for the applied research in particular. The results of basic research will be fulfilling the function of an inspiration in a more significant way for other types of research that are closer to the practical implementability.
- [53] The social and economic needs addressed by research, mainly when the primary or first user of the results is the state or non-profit sector (for example in the area of education and health care) will be implemented mostly through the applied research that is relatively close to the practice, but enables up to one hundred per cent financing from the public funds..
- [54] For the purpose of higher utilisation of the R&D results in practice the support of projects financed partly from the public and partly from the private funds will continue. The transfer of technologies and increase in the private investment into research and development in the Czech Republic will be advanced not only by programmes, both national and sectoral, but also by improvement in the corresponding general conditions as well. Among these conditions are the access to a sufficient offer of adequately qualified human resources, strong base of the public research, culture of entrepreneurial initiatives, appropriate

systems for protection of the intellectual property rights, pro-competitively oriented environment with rules being favourable for research, innovations and competition, active financial markets, and favourable macroeconomic and taxation conditions.

- [55] With launching of the National Research Programme an opportunity has opened to the foreign subjects in the area of research and development to participate in this programme on condition that these subjects will not ask for financial assistance from the public funds. The application of the participation funding of numerous projects is therefore envisaged within the national programme, where part of project cost will be financed just from abroad.
- [56] The implementation of the national policy in the priority area of transfer of the R&D results into practice will be coordinated with implementation of the national innovation strategy, with possible employment of instruments highlighted in this very innovation strategy.
- [57] It will be necessary to support the transfer of results particularly by following methods:
 - a) to support the protection and dissemination of the intellectual property, including institutional and economic arrangements of this area,
 - b) to manage the appropriate programmes by highly qualified managers collaborating with the public administration bodies on all levels,
 - c) to work out the system of education of workers and R&D human resources development in the area of transfer of technologies particularly with utilisation of the structural funds,
 - d) to set up and observe the ethical code in this area.

The proposed measures for provision of system priorities of research and development following from the Action Plan for Europe:

- A) To conceive proposals for the research workers career orders aimed at facilitating the liberalisation of the procedure for hiring, evaluation and career development of research workers.
- B) To win more students for research particularly by increasing the financial motivation, with facilitation of the student's mobility.
- C) To increase the attractiveness of employment in research and advance mobility between universities and industry.
- D) To submit to the government a complex proposal for evaluation of results and effectiveness of research and development.
- E) Incorporation of the Czech Republic into the Open method of coordination of national policies in the area of research and development as a whole or its parts.
- F) Participation of the Czech Republic in formation of the European technological platforms.
- G) Support of participation of industry and other interested groups on determination of the public research priority objectives.
- H) Provide for the students of the last grades of technical, economic and natural historical universities gain basic information on the intellectual property and transfer of technologies.

III. PRINCIPLES AND VISIONS OF R&D POLICY OF THE CZECH REPUBLIC

- [58] In compliance with the government's statement of policy this national policy has been prepared in close cooperation with the general professional public. This document is created not only on the basis of the R&D needs in isolation from the requirements of the entire society, but it helps on the contrary by relevant form to fulfil the needs of the citizens and demands on the quality of life and creation of the welfare of the whole society.

III.1. The openness, flexibility and transparency at preparation and implementation

- [59] The R&D policy will continue to be prepared and implemented openly with a broad participation of representatives and organisations of individual R&D sectors and representatives of the R&D results users.
- [60] The institutional and organisational arrangement of research and development, orientation and rules of the R&D state support cannot remain unchanged for a long time. In the course of the R&D policy implementation the successfulness and effectiveness of research and development in the Czech Republic (including the internal and external conditions for their development) will be monitored and evaluated with timely proposals for changes in the policy and instruments for its implementation.
- [61] The state administration bodies, R&D institutions and organisations must prevent any sign of suspicion of non-objective and improper lobbying at allocation of financial means by timely informing the general and professional public and enabling free access to all information.
- [62] The institutional, organisational and administrative arrangement is going and will go through changes in the period of this national policy, some of them resulting from its implementation. At preparation of measure implementing the national policy and having generally valid or broad impact it is recommended to proceed by formation of consensus and joint coordination of preparation through working groups and coordination council or other working or steering bodies. But since it is necessary on the other hand to retain a certain decision-taking power and operability at solution of problems related with this national policy implementation, an optimum way will be used in determination of number of representatives in the mentioned bodies between the range of consensus and operability.

III.2. The interrelation with other areas

- [63] At preparation of the next R&D policies a special attention will be paid to coordination with policies for other areas of the state interest. The bodies and institutions responsible for its implementation will attempt at securing these so far neglected relations.
- [64] In compliance with results and conclusions referred to in the Analysis of the previous trends and existing state of research and development in the Czech Republic and

a comparison with the situation abroad the emphasis will be given on strengthening the relations of the national R&D policy with other thematically close national policies. As far as the policy of education is concerned the emphasis is put on the interrelation of research and development with the pedagogical activity on the universities in particular. The implementation of R&D policy will be coordinated with implementation of the human resources development strategy for the Czech Republic, implementation of economic policy (industrial, energy, proexport), social, educational, health care, agricultural, security, information, environmental, transport, cultural and foreign policies. In the future it will be coordinated as well with the innovation policy, the formation of which is desirable to be accelerated.

- [65] The strengthening of coordination requires above all the preparations and implementations of national policies in areas concerning institutions, centres or facilities both for research and development and other purposes; first of all this is the area of infrastructure, where libraries, computer networks and other facilities are utilised in this way, then education and the area of culture (e. g. museums). A specific requirement is the mutual compatibility of the educational policy and research and development in the form and extent of interconnection of the tertiary education with research.
- [66] At adequate orientation and with suitable instruments the R&D support in the Czech Republic will become, similarly as in abroad, the instrument of the social policy or policy of employment respectively – the implementation of R&D results contributes to creation of new and mostly qualified jobs.
- [67] The support of cooperation between the research and development institutions of different types, including establishment and development of research centres and communication and information infrastructure will lead to an effective use of integrated potential of the state-funded research and development.

The proposed measures for support of interrelation and transparency
of preparation and implementation of the national policy resulting
from the Action Plan for Europe

- I) The Open method of coordination on the national level will be ensured based on the simply structured methodology and indicators fully in compliance with the comparison indicators (benchmarking) of the national policies of research and development within the European Research Area. The analytical groundwork for preparation of the next National Research and Development Policy in the Czech Republic, as well as periodical analyses from the area of research and development within the meaning of Article 35(2b) of Act No. 130/2002 Coll. on R&D support will be also based upon evaluation of these indicators.

IV. STRATEGIC INSTRUMENTS

- [68] The instruments serving for fulfilment of NR&DP objectives form an important part of this policy particularly at present when the public budgets reform is putting increased demands on formation of priorities of R&D public support and approaches towards

Barcelona objectives. In the period of the 2000 national policy significant legal regulations were issued for the area of support and administration of research and development. This policy proceeds from them and addresses first of all how to make the utilisation of R&D strategic instruments more effective.

IV.1. The financing and support of research and development – main instrument of R&D policy

- [69] The government implements its NR&DP at drafting of the middle-term outlook of R&D support and then each year when preparing and approving the state budget.
- [70] The 2000 R&D National Policy of the Czech Republic was based upon the government's commitment to attain 0.7 per cent of GDP share of state budget expenditures on research and development in 2002, the reality was 0.54 per cent of GDP. The non-fulfilment of the amount of expenditures approved by the government was criticised by European Commission and led to the situation that certain policy objectives could not have been met.
- [71] The amount of funds for research and development for 2004–2006 proceeds from the approved outlook of the state budget by the end of 2006 (Government Resolution No. 984 of 1 October 2003) with following target indicators for individual years (in CZK and per cent of GDP):
 - [72] 2004: CZK 14 583 876 000 (0.58 % of GDP)
 - 2005: CZK 15 814 297 000 (0.59 % of GDP)
 - 2006: CZK 17 143 560 000 (0.60 % of GDP)
- [72] In the subsequent period of the national policy, i. e. from 2007 to 2008 it is possible to proceed from the following variant solution:
 - a) the expenditures will grow by more significant pace (recommended growth by 0.1 per cent of GDP per year) allowing for smooth fulfilment of the requirement to adjust the amount of public expenditures for research and development by 2010 resulting from the objectives of the Lisbon strategy (even at the cost that the research and development funds are raised at the expense of any other area), or
 - b) the growth of expenditures in 2007–2008 will be slower and the Czech Republic either will have to only approach the fulfilment of that part of Lisbon strategy that count on the fact that in 2010 R&D public expenditures will reach 1 per cent of GDP, or raise significantly the funds for this area in the last two years of the first decade of the 21st century.
- [73] At the relatively low growth of the support amount the primary objective of the policy is to differentiate the support according to the attained R&D results, their application and concrete benefits.
- [74] Considering the largely limited amount of R&D public funds in the three years' outlook it will be necessary to search for reserves in the restriction of support of not very perspective programmes, cancellation of not very efficient work sites, etc. The Czech Republic is not capable of ensuring the existing range of research and development in the following years with its stagnating public support.

IV.1.1. The public support of research and development

- [75] The quality and scope of the research base, including the long-term research, are crucial for the dynamics of the economy based on knowledge. Considering the temporarily limited public funds it will be required first of all to maintain the above-standard high-quality, important and perspective existing activities, and those new R&D activities that could lead to success in the international competition and practical implementation of R&D priorities.
- [76] In the middle term outlook for 2005 and 2006 there will be a growth in the public expenditures for research and development by amount exceeding CZK 1 billion. Most of these funds will be used for funding of the National Research Programme II.
- [77] The share of private expenditures on the overall R&D expenditures has been increasing relatively in the last two years. At the same time, however, the private sector orientates its R&D expenditures to a short-term commercially utilisable research and development. The inadequate investments into research and development of perspective, though more risky high technologies still prevent the growth of competitiveness of the Czech economy.
- [78] The types of financing from the public funds will be distinguished more significantly than so far. Since 2004 R&D results will become the basic criterion for allocation of the public funds. The aim is to obtain an instrument for evaluation of effectiveness of individual programmes and other R&D activities and their comparison between themselves.
- [79] The overlapping between departments and programmes or within individual activities of research institutions (projects/grants – centres – research plans) will be reviewed with a view to discover any possible leakage of funds. The lacking results will be consistently taken as a reason for revoking the support, funds being released late or disorder in a department will mean sanctions, etc.
- [80] At the same time with non-fulfilment of 2000 NR&DP objectives in the amount of the state support, there occurred disproportions between the individual parts of the research. The aim of the policy after 2006 is to remedy these disproportions gradually, particularly to raise the low share of support of industrial research and development to the level customary in advanced countries, with taking into account the attained results.
- [81] Even at the present level of the public expenditures growth the raised disproportions will be removed, but the volume of free (available) means is small and the recovery will take many years. Therefore emphasis will be put on reassessment of the existing expenditures.
- [82] The policy principles will be projected into the budget in two levels. The first one is the specification of the middle-term outlook data (on the level of budget chapters) at preparation of the budget for the following year. The second one is the three years' middle-term outlook itself.
- [83] The state R&D support will maintain the balanced proportion of various types of financing – from the institutionally supported carrying research plans of organisations, through the targeted grants for individuals or small teams to R&D projects within the thematic and cross-sectional programmes of the National Research Programme or departmental programmes.

IV.1.1.1. The targeted support of research and development

- [84] The commitment to formulate rights and duties of providers and applicants, or receivers respectively in R&D tender was fulfilled by Government Decree No. 88/2001 Coll., Act No. 130/2002 Coll. on R&D support and consequential Government Decrees Nos. 267/2002 Coll. and 461/2002 Coll. Thus the period started of gradual transition (as the projects commenced under the former legal regulations terminates) in the course of which the whole area of research and development will start to apply these regulations step by step.
- [85] The decisive instruments are the programmes of targeted funding of research and development, by which the research priorities of the national policy, as well as of sectoral and regional policies are realised. Very serious problems are marked as priorities with clearly defined objectives, for the solution of which research capacities and financial means are concentrated; the attainment of declared objectives must be evaluable in retrospective. Important is also the stimulation role of research financed by grants, by which the exploratory research will continue to be supported.
- [86] It is absolutely essential not to admit fragmentation of the target financing of research and development into numerous programmes, the coordination of which cannot be ensured. The efforts spent on evaluation of thousands of tiny projects cannot prevent mutual overlaps or repeated solutions, particularly with projects having indefinite and generally set targets. This problem may be addressed by a unified selection of priorities, introduction of a unified methodology of programmes administration and evaluation of the targeted funds on the project and programme levels. Therefore a considerable part of the targeted funds is spent on national programmes having qualifications to meet the above mentioned requirements.
- [87] Since 2006 another element of the targeted support of research and development (with amount ca 10–15 per cent of the targeted funds) will become the National Research Programme II by which the research priorities for 2006–2011 will be solved. The departmental programmes will be oriented on solution of problems of individual departments. The support of industrial research and development will be growing.

IV.1.1.2. The institutional support

- [88] The long-term research activity of any particular institution is financed by form of institutional support of its research plan. The rights and duties of a provider and applicants are defined by Act No. 130/2002 and consequential Government Decrees Nos. 267/2002 and 462/2002 Coll., as amended by Government Decree No. 28/2003 Coll. The research cooperation of institutions is then supported by the targeted financing.
- [89] The research plan defines the subject of the research activity including the R&D infrastructure, objectives, strategies, estimated results and corresponding cost of activity of an organisation in basic and applied research for the period of 5 to 7 years. The aim of the institutional financing is to ensure long-term development of research in the organisation in question.
- [90] The evaluation of research plans will be made on the field principle, except for justified exceptions approved in advance. In addition to professional qualities, the purposefulness

of the spent funds will be assessed in the evaluation, including the possible relations of research plans to grants, projects and other forms of targeted support of research and development.

IV.1.2. The indirect support of research and development – tax, customs and other R&D allowances

- [91] The indirect form of R&D support, as a supplement to the direct support, will be enforced in the Czech Republic in the scope allowed by the public finance reform, as a significant stimulus for provision of 2 per cent of GDP for research and development from the private funds. This amount of private expenditures should be attained by the EU member states in compliance with the Lisbon strategy and Barcelona objectives by 2010.
- [92] Evaluated will be possibilities of application of certain indirect instruments of R&D support in compliance with the international engagements of the Czech Republic and EU standards. Such instruments are particularly as follows:
- a) depreciation,
 - b) stimulation of growth of investments into those areas of research and development, which are risky as far as the returnability and profit generation are concerned (e. g. in view of the still very significant distance of the research made from the realisation itself),
 - c) exemption from customs duty³,
 - d) exemption from gift tax – paid by the beneficiary,
 - e) income from granting of the intellectual property rights,
 - f) various combination of support for the small and medium-sized enterprise, employment, R&D activities, ecology, problematic regions,
 - g) advantageous loans (preferential interests),
 - h) advantageous lease of state/regional infrastructure to R&D activities (simplification of access to certain technological facilities, testing laboratories, purchase of licences by state for R&D activities, etc.),
 - i) application of contracts for research and developments within the offsets.
- [93] If there arise any possibility of exceptions within the public finance reform for particular areas in the new tax system, one of these areas will be research and development with application of some of the above mentioned indirect instruments. In any future legal regulations providing for the respective indirect support instruments it is necessary to observe the requirements referred to in the relevant legal regulation of the European Communities.

¹ After the accession to EU the exemption from the import customs duty will not be in the national competence of the Czech Republic.

IV.2. The legal environment and organisational structure of research and development, morality and ethics

IV.2.1. The legal environment of research and development

- [94] Act No. 130/2002 Coll. on R&D support means a considerable progress. It approximated the system of R&D support to systems customary in the EU member countries. The act provides transparently for the tender in research and development, addresses the regulation of relations between the provider and receiver of the support, regulation of ownership rights to R&D results and use, competences in research and development administration, etc.
- [95] The formation of more favourable institutional conditions for more intensive and effective development of research and development will be contributed by the act on public research institution (PRI) that is under the preparation. This act is aimed at transformation of the unsatisfactory legal form of contributory organisations to public research institutions having similar position in principle and their activity being developed on similar principles as the public universities. This new legal regulation is to ensure particularly the clear specification of the PRI statute, regulation of their establishment and dissolution, higher independence of PRI in orientation and performance of research, development of various forms of cooperation of PRI with universities and the private sector, as well as higher transparency at utilisation of the public funds.
- [96] Even if the prepared reform of public finance may complicate the introduction of the indirect R&D support instruments, the continuous introduction of the indirect support instruments in the course of the reform is expected along with improvement of conditions for application of this type of support. Experiences from many EU countries confirm that indirect support instruments are the most suitable instrument for increase in the private sector investments into research and development. The indirect form of support will complement the direct support – subsidy in cases when its individual direction and controllability can be guaranteed.

IV.2.2. The structure of R&D system in the Czech Republic

- [97] The structure of R&D system in the Czech Republic is gradually approximating the structure prevailing in the OECD countries. But research and development in CR is less flexible, lacks additional capacities for fast and effective transfer of results between the individual levels of research to the development of new products, technologies and services. In compliance with the European trends the share of universities both in the resources for the basic research and total support of research and development will grow.
- [98] At present, research and development in the Czech Republic is realised on universities, in the institutes of the Academy of Sciences, in departmental research organisations and in independent or not independent sites in the private sphere. Between 2000 and 2002 the share of the overall public expenditures for research and development on universities increased. There is also not very high number of R&D organisations of a non-profit character (civic associations, public beneficial organisations). The share of these non-profit organisations on the overall R&D capacities is marginal similarly as in most of the OECD countries.

- [99] This structure is complemented by scientific and technological parks and business centres, in which small firms concerned with high-tech production and services are being established and developed.
- [100] The Government will support further development of cooperation between all subjects of research and development in the Czech Republic.
- [101] Further development of research and development on universities will be based obviously on the increased support towards universities realising higher extent of research and having better R&D results, or excellent teams and sites on other universities. All aspects of this approach will be evaluated by a separate study. The study will be discussed with the representatives of the universities.
- [102] The Czech Republic does not have any professional work site that would work out the groundwork for preparation of highly professional analytical and conception documents for preparation and implementation of the National Research and Development Policy. Within EU these work sites are being part of the research base of individual member states. In the Czech Republic similar work sites exist practically for all areas with the exception of research and development, therefore establishment of such work sites also for this area will be supported.
- [103] The solution of surviving problems of research and development in the Czech Republic, including the insufficient benefits of research and development for the economy and society, different level of evaluation of R&D results, extensive fragmentation of R&D resources and capacities exceeding the possibilities of a country of the size of the Czech Republic, etc, must be supported also by administrative authorities having competencies for research and development, above all by more unified approach to evaluation of results on both project and programme level, on the basis of the generally accepted criteria.
- [104] The further validity of the act on R&D support from public funds (Act No. 130/2002 Coll.) and act on competency (Act No. 2/1969 Coll.) is expected. The outsourcing, besides the results of the ongoing public administration audit, will be used for the personal ensurance of fulfilment of the increasing number of tasks in the area of R&D administration.

IV.2.3. The regional aspects of the structure

- [105] The regional structure of the organisation of research and development process in the Czech Republic still remains underestimated. With regard to the accession to EU it is necessary to take into account the fact that the very regional aspects of the research and development process stand in the heart of attention of a new concept of formation of the European Research Area. From the material viewpoint these are as follows:
 - a) organisation of links between the European, national, regional and local level of the research and development process,
 - b) link between the respective levels of the public administration in relation to the organisation of the research and development process in regions and localities,
 - c) finding of a suitable rate of subsidiarity between various levels and structures of the research and development organisation,
 - d) ever strengthening role of regional universities in the area of the social and economic development of establishments and regions,

- e) stimulation of cooperation between the private sector and subjects of research and development.
- [106] The emphasis on regional character of the research and development efforts is applied in most of the EU member countries. This approach is expected to become the normal framework of the research policy of EU. The existing system of research and development organisation in the Czech Republic is not capable of effective involvement of the regional intellectual and financial potential into the national entirety. Important is the role of science, research and development in the regional policy, particularly in the sense of dynamics of the social and economic development of regions. Thus research and development becomes the essential instrument of the regional policy. The regionalization should not further diffuse the fragmented structure of universities and research institutions, but should mean the consolidation of research and development on regional universities, applied research in regional firms, and formation, as the case may be, of branches of the existing well-established universities and research institutions.
- [107] Considering the unmarked organisational and administrative profiling of the so called NUTS 2, i. e. territory consisting of several regions (NUTS = Nomenclature of Territorial Units for Statistics), a suitable coordination authority in the Czech conditions from the view of R&D needs can be considered the territory NUTS 3 (region), despite considerable disproportions in the area and number of population of individual regions.
- [108] The role of regional offices within the self-governing competency will consist particularly in:
- a) formulation of regional strategy of R&D development and allocation of financial means within the regional budgets for supporting the research and development process,
 - b) support of access to national and EU projects of research and development, acquiring of means within the EU structural funds and organisation of research and development interregional cooperation on the national and international levels,
 - c) arrangement of scientific and technological and development parks, establishment, stimulation and management of regional associations for research and development, foundation and support of public research institutions,
 - d) arrangement of horizontal cooperation between regional subjects active in the private sphere, science, research, development and education, non-profit and public beneficiary organisations.
- [109] The regional level is the essential place for new arrangement of relations between entrepreneurs and research and educational institutions, particularly along the line of “spin-off” new effective entrepreneurial subjects based on application of new scientific and research knowledge in the entrepreneurial practice. This form of arrangement may be applied also on the level of larger towns and their hinterland, or at creation of the micro regionally designed scientific and technological parks.
- [110] The representation of universities in the regional associations for support of science, research and development is a necessary condition for getting over the so far communication barrier between the individual actors of the regional development. At the surviving low utilisation of the intellectual capacity on the local and regional level, and considering its concentration in the main political centres of the country, the dynamizing

role of the locally competent universities based on the interconnection of the high-quality research and education, is very significant.

IV.2.4. Relations between research and development and the public

- [111] The 2000 National Research and Development Policy put the stress on the necessity of the fast and effective communication between the state administration workers, R&D organisations and workers, users of its results and the public. In many cases these intentions are being successfully fulfilled. The duty to inform on spending of R&D funds and attained results was included in the act on R&D support from public funds (Act No. 130/2002 Coll. on R&D support). Public discussions are announced for preparation of the fundamental R&D documents. The public is informed on results of such discussion, process of preparation and final version of documents. Also Internet is used for informing the public, e. g. site www.msmt.cz or www.vyzkum.cz.
- [112] The importance of a two-way communication with public is growing higher. The public must be relieved of fear from the undesirable impacts of research and development (e. g. ineffective spending of public funds, research on human embryonic stem cells and its utilisation, etc.), must gain certainty that public R&D funds are spent for its benefit, that research and development contributes to improvement of the life quality. The mutual communication will contribute also to solution of ethical issues of research and development.
- [113] A special attention will be paid to themes like nuclear energy utilisation, use of embryonic stem cells for therapy, genetic engineering, information on quality and health effects of foodstuffs, global changes in atmosphere, etc. where there may arise fear from consequences of applications of new discoveries. Without an effective dialogue between research and development and general public there is an ideal space for misinterpretation, disinformation, or even manipulation with the public opinion.
- [114] The activities improving the knowledge and co-decision-making of the public in the area of research and development, as for example radio and TV programmes, public lectures and discussions, magazines, contests, educational materials for elementary and secondary schools, exhibitions, etc. will be supported by specific programmes. Museums may get engaged into these activities as well. The same applies to Internet.

IV.2.5. Ethics in research and development

- [115] The improvement of ethical level in research and development proceeds as in other areas relatively slowly. The situation is still influenced by the strong underestimation of ethical aspects of life under the past regime, deficiencies in education and development of new generations, as well as the fact that only few ethical principles can be transferred into the form of legal regulations. In this area the state may rely only on calls, recommendations and support of activities struggling for improvement.

IV.2.5.1. Ethics of R&D individuals, organisations and management

- [116] The R&D workers will describe, explain and present only discovered knowledge; not taking possession of the results of others, always citing authors and sources of

the somebody else's knowledge; using means, facilities and apparatuses provided for research and development in an effective way.

- [117] The government recommends to R&D organisations and institutions so far not having issued their own ethical code to do so in the shortest possible time. The same applies to the establishment of ethical commissions.
- [118] Within evaluation of research and development the government is going to support the exchange of experiences and knowledge with creation and application of ethical codes in research and development. The responsible bodies of the government will incorporate proposals and recommendations for introduction of necessary requirements following from the R&D ethics into the proposal of respective legal regulations.
- [119] The ethical aspects of both research and development and any human activities must not be forgotten at any level of R&D management. The competent authorities are responsible for observation of ethical aspects at evaluating of draft projects, research plans, individuals, teams, organisations and institutions, at decision taking on granting of funds for research and development.

IV.2.5.2. Ethics in specific areas of research and development

- [120] Especially demanding for definition of ethical principles are those branches of research and development that are related to non-therapeutic and therapeutic clinical studies, trial experiments with embryos and embryonic cells or trial experiments on animals, etc. The publication of ethical codes and establishment of ethical commissions in institutions and organisations practising research and development in mentioned areas is essential.
- [121] The ethical matters will be addressed already in the draft programmes, conditions for submission of draft R&D projects and research plans, in methodological instructions for their evaluation, decision-taking on the support granting, evaluation of their course and results.
- [122] The especially ethically exposed experiments concerning for example genetics, embryology, psychiatry or maintaining of life by exceptional technical aids will be performed only on accredited sites aimed at this purpose.

The proposed measures for support of strategic R&D instruments resulting from the Action Plan for Europe

- J) Optimisation of combination of various financial instruments with respecting the needs of different industrial branches and specifics of the Czech Republic in comparison with abroad
- K) Preliminary and continuous balances of benefits from structural funds that the regions may acquire for implementation of measures in the area of research and innovations
- L) Utilisation of the resources integration and cooperation of national programmes, e. g. within ERANET network
- M) Support for establishment and starting up phase of research-intensive enterprises.

- N) Evaluation of introduction of any of the above stimulus of indirect support for increasing the attractiveness of the career in research
- O) Strengthening of knowledge of small and medium sized research-intensive enterprises on the possibilities of use of provided forms of direct and indirect support
- P) Adaptation of legal and other standards and regulations in such way not to become a barrier of the European cooperation in the area of research and development and transfer of technologies
- Q) Improvement of the public administration efficiency for support of research and development by coherent combination of various political measures and support of their interactivity and compatibility on the European level.
- R) Searching and mapping of technological areas, in which the legal barriers or gaps prevent the introduction of new technologies
- S) Support of a platform for mutual learning that would assist the regions at further development of their research strategies, while respecting their specific conditions. In the long-term considered may be also the preparation of typology of regions, methodology for comparative evaluation of regional performance in the area of research, development and in relation to innovations.

IV.3. Information and technical infrastructure of research and development – condition of modern research and development

IV.3.1. Infrastructure of research and development

- [123] The R&D infrastructure is a summary of resources, services and human potential, among which the communication links are realised creating a network structure. The network structure serves to both horizontal and vertical cooperation in the area of research and development, including cooperation between the basic and applied research and technological or social employment of their results in the area of transfer of technologies. The fundamental function of the research and development infrastructure is to support, coordinate and concentrate capacities used for research and development, and their connection and sharing.
- [124] The fulfilment of the basic tasks of R&D infrastructure, including provision of necessary unique equipment and necessary transfer of technologies will ask for an adequate financial provision. An optimum model of public support for effective and modern work of R&D infrastructure will be searched for.

IV.3.2. Information infrastructure

- [125] The main purpose of existence of a modern information infrastructure is to ensure conditions for effective cooperation of large scientific teams, whose individual parts may even differ in various countries. This cooperation and shared use of capacities and resources is allowed by the high-speed computer networks and newly grids (distribution networks). They represent a new generation of information infrastructure connecting the high-speed computer networks with connected computing and data capacities, unique

equipment and other services. At the same time the grids standardise interconnection of various sources and their use; cooperation in the network and building and operation of infrastructure will become easier and more economical.

- [126] In the course of the following years the formation of distributed research teams can be expected in all scientific branches and on their borders. Their formation will lead to a higher pressure on the use and further development of the information infrastructure, including grids. Through them not only the effectiveness of the scientific work will increase (by reducing the redundant cost, concentration on factual competences of individual parts of these teams, impact on the regional level), but also the readiness of scientific team of the Czech Republic to the full-value involvement into ERA.
- [127] Following the needs of the created research teams the formation, operation and long-term development of the corresponding grid infrastructure will be explicitly supported, without endangering further development of the basic layer of the high-speed computer networks.
- [128] Activities leading to integration of the Czech Republic into the all-European infrastructure in the area of computer networks and grids will be advanced, including spending of the sufficient capital funds for the national part of the international grids.
- [129] The support of the intensive employment of the existing infrastructure will be oriented at prevention of creation of unnecessary duplicities; however the regional activities will not be suppressed, but rather directed to integration into national and supranational structures.

IV.3.2.1. Libraries as guarantors of availability of information sources

- [130] The libraries are the integral part of R&D information infrastructure. Their basic task is to ensure the creation of information funds, availability of these funds and other information sources for the needs of research and development, mediate their utilisation to the largest possible extent and contribute to evaluation, dissemination and application of R&D results.
- [131] The support of these functions and services will be conditional upon the broad cooperation within the system of libraries connected by communication and computing devices and particularly by shared funds and services being physically and virtually concentrated.
- [132] The availability of information funds and sources of the needs of research and development must be legally ensured by acts regulating the requirements and copyright statute of works arising as a result of research and development (dissertation and habilitation works, research reports, etc.).

IV.3.3. Information system of research and development

- [133] The purpose of the information system of research and development (R&D IS) is to gather, process and make available the information on research and development in the Czech Republic that is financed (subsidized) from the public funds. Enforced will be the principle of open access to the research data and information arising on the basis of support from public funds.

- [134] R&D IS will be developed as part of R&D infrastructure in compliance with the needs of the state administration in the area of research and development, as well as with the needs of the user sphere, and will be equipped with user instruments enabling, among others, to compare the attained R&D results in relation to the funds spent.
- [135] R&D IS will be step by step harmonised with the EU standards through the established exchange format CERIF and implementation of CERIF format into IS.
- [136] The functional and process connection of R&D IS with the system associating the representative metadata (catalogue records) on R&D projects from many European and non-European countries (CRIS) will facilitate the integration of research and development of the Czech Republic into ERA and global scientific and research activities.

IV.3.4. Large research infrastructures

- [137] The acceptance of the basic idea of ERA, i. e. concentration of human, financial and apparatus potential in the above-critical quantity around the key research infrastructures with the aim to attain a maximum added value requires to create the necessary legal and financial conditions going cross-sectionally through the individual departments and guaranteeing on the nation-wide level a maximally transparent decision-taking on each concrete project.
- [138] At the same time it is, however, necessary to ensure a respectable long-term partner participation in important activities of large and important foreign and international infrastructures always when it is useful, financially advantageous, or even the only possible alternative. For this purpose it is necessary to use the own information infrastructure effectively.
- [139] The suitable germ of research infrastructures in the Czech Republic may become certain research centres. Their purpose and aim is to increase the level of the interbranch and interdepartmental cooperation, interrelation of research with potential users of its results, successfulness in the international competition, support of qualitative changes in the equipment of perspective teams, effective utilisation of expensive unique apparatuses and devices, as well as possibility of work of young professionals.

IV.3.5. Infrastructure of services

- [140] Infrastructure of R&D services will include also services and institutions that are not carrying out the research itself, but assist at research and development, or increase its efficiency and effectiveness (e. g. consulting offices, agencies, etc., offices/agencies for administrative and organisational provision of allocation of public R&D contributions, evaluation of the course of utilisation of these funds and attained results, management and business consulting for the research workers particularly from public research organisations, work sites/agencies for influencing the public relations to research and development, publishers of the scientific literature, offices/agencies for support of the research workers mobility, etc.). With some services it may be expected that it is sufficient to support them only for the period of establishment and starting of activity. The financing to a newly founded and existing institution may be granted only on the basis of a project/research plan specifying activities and services of that given institution.

The proposed measures for support of R&D information
and other infrastructure following from the Action Plan for Europe
and benchmarking of European countries (marked by*)

- T) The support of infrastructure for preparation and transfer of information, e. g. on best available technologies for decisive categories of products. This information enables the ordering subjects to search for technologies best corresponding to their requirements, particularly in the areas of health care, environment, transport and education, in which the public administration is often the first customer.
- U) *Arrangement of possibilities to establish business centres with links to research and development, scientific parks by searching for new types of public and private partnerships.
- V) *An extraordinary support of small and medium sized institutions and museums, including their mutual cooperation with respect to their fulfilment of regional requirements and approaches in support of understanding the science by the public, particularly the very young generation.

National Research Programme

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1. Introduction

The government in its decree No. 517 of 22 May 2002 has set a task to prepare the National Research Programme (NRP). Ministry of Education, Youth and Sports has been in charge of elaboration of this national programme draft. Technology Centre of the Academy of Sciences of the Czech Republic, which co-operated with the Engineering Academy of the Czech Republic, has drawn up establishment of research priorities for the national programme. Specialists from universities and research institutes as well as from companies making use of the results of research have co-operated in expert panels in preparation of the research priorities.

The Government has approved the NRP by its decree No. 417 on 28 April 2003. Its approval has been a necessary step from draft to implementation of the national programme preparation. Invitation to tenders by providers for individual NRP parts that has been approved by the Office for the Protection of Competition is a principle step of implementation. After selection of successful project proposals concluding of contracts between providers (mostly ministries) and applicants will follow. Information on new projects within NRP will be provided under the conditions stated according to the Act on the Research and Development Support. Afterwards the providers will release the means allocated for separate projects by 1 March 2004.

The NRP counts on the project orientation aiming at applications and industrial or other practical implementations. Therefore it is envisaged at least by more successful projects a progressive transition from industrially remote research type through applied research pertinently up to industrial research near to the market or other practical application.

Transition from basic research to applied one, which is closer to the practical implementation, is more long-term process. Therefore it is important to finance within the NRP besides of short-term projects also longer projects, e. g. five-year projects.

Through the NRP elaboration a significant step has been made towards preparation of a standard national programme analogous to similar programmes of the European Union countries. Taking into account decentralisation in providing public support for research and development in the Czech Republic the financing of NRP from one budgetary chapter is not envisaged. Particularly method of providing support from the series of budgetary chapters remains to be the main difference from the similar foreign programmes.

Simultaneously with commencement of this NRP also a preparation of the National Research Programme II will be launched. This new national programme will be submitted to the Government by the end of February 2005.

Means for solution of the National Research Programme for 2004 and 2005 will form a component part of proposal on total expenditures on research and development of individual budgetary chapters, which the Vice-Prime Minister for research and development, human resources and human rights and chairman of the Council for Research and Development submits to the government according to the Act No. 130/2002 Coll.

2. Objectives

The aim of the National Research Programme is elimination of previous uncoordinated procedures of the research programmes falling within the activity of individual organisations and utilisation of modern approach “technology foresight” by preparation of priorities draft for this national programme involving the professional public at large. The goal of elimination of

existing methodical and organisational difference of programme preparation, implementation and assessment was no less important.

The main task of own national programme draft preparation was particularly to propose priority research trends that are able to contribute to a favourable economic development and meeting of our society's social needs with optimal utilisation of means for research and development.

The National Research Programme takes into account changes of domestic and international conditions for research and development. The conditions have been changed through becoming effective of the Act No. 130/2002 Coll. on the Research and Development Support. Changes of external conditions have emerged first of all from progressive integration of the Czech Republic into the European Research Area.

The NRP is focused on meeting of the following basic requirements:

- a) Increasing of the research performance and effectiveness of the Czech Republic and thus raising their benefit for the economy and society. Concentration of support resources and research capacities on less number of selected issues, the solution of that the general public considers as urgent and for solution of which sufficient conditions exist and by that there are assumption for utilisation of achieved results.
- b) Assurance of dynamic recovery and development of research capacities in the Czech Republic using all possibilities of international co-operation in the research.
- c) Strengthening and development of relations of general public to the research and development, elimination of possible general public fear of undesired research and development consequences.
- d) Increasing of professional level of the research work and usability of the research results in practice.

3. Duration

The National Research Programme will be announced for the period 2004–2009. Tenders for submitting of proposals on research projects were announced in 2003 and selection of research projects will be completed in the same year. The first project will start at the beginning of 2004. All projects will be completed not later than in 2009.

It is envisaged that duration of solution of most projects will take 3 up 5 years. Simultaneously with running of present NRP the National Research Programme II will be prepared as it is usual in the European framework programmes as well as in national programmes of individual EU member countries.

The NRP will not be launched from January 2004 at once in its entirety but its getting under way will be gradual. The main reason for that is the fact that it is not possible to finish the existing programmes which started in previous years or simply transfer them into NRP.

4. Basic NRP Topical Structure

The National Research Programme consists of five thematic parts and three cross-sectional parts. Both thematic and cross-sectional programmes (parts) are further divided into sub-programmes.

Public tenders for submitting the project proposals have been announced for these individual NRP parts (or sub-programmes) by the respective provider. The detailed structure of the NRP is shown in table I.

Table I Structure of the National Research Programme

<i>Thematic programmes (TP)</i>	<i>Sub-programmes</i>	<i>Provider</i>
1. Life quality	1. Human Health 2. Quality and Safe Nourishment of Population 3. Landscape and settlement of the Future* 4. Environment and Natural Resources Protection	Ministry of Health Ministry of Agriculture Ministry of Environment Ministry of Environment
2. Information society	1. Intelligent Systems for Decision Making, Management and Diagnostic 2. Information and Knowledge Management 3. Communication Infrastructure and Technology 4. Computer Modelling and Design of Systems and Processes	Academy of Sciences of the Czech Republic Academy of Sciences of the Czech Republic Academy of Sciences of the Czech Republic Academy of Sciences of the Czech Republic
3. Competitive-ness at Sustainable Development	1. Production Processes and Systems 2. Safety and Economical Transport 3. Buildings and Constructions 4. Advanced Materials 5. Emerging Technology 6. Utilisation of Natural Resources	Ministry of Industry and Trade Ministry of Transport Ministry of Industry and Trade Ministry of Industry and Trade Ministry of Industry and Trade Ministry of Agriculture
4. Energy for Economy and Society	1. Safety and Effective Nuclear Energy 2. Power and Non-Power Producing Utilisation of Coal and Carbonaceous Raw Materials 3. Rational Use of Energy and Renewable Energy Sources	Ministry of Industry and Trade Ministry of Industry and Trade Ministry of Environment
5. Modern Society and its Transformation	1. Performance-Oriented, Safe and European Integrated Society 2. Social Cohesion, Social Differentiation and National Identity	Ministry of Labour and Social Affairs Ministry of Labour and Social Affairs

<i>Cross-sectional programmes (CSP)</i>		
1. Human Resources for Research and Development	1. Support for Young Scientists to Start Research 2. Human Resources for Research and Development	Ministry of Education, Youth and Sports Ministry of Education, Youth and Sports
2. Integrated Research and Development	1. Research Centres 2. Information Infrastructure of Research and Development 3. Support of Goal-Directed Research and Development projects	Ministry of Education, Youth and Sports Ministry of Education, Youth and Sports Academy of Sciences of the Czech Republic
3. Regional and International Co-operation in Research and Development	1. Regional co-operation 2. International co-operation	Ministry of Education, Youth and Sports Ministry of Education, Youth and Sports

* Ministry of Agriculture will invite tender for agricultural topical area in this sub-programme.

Multilevel structure is used for huge research and development programmes in most member states of Organisation for Economic Co-operation and Development (OECD), for framework research and technological development programmes in the European Union and for national research programmes of its member countries.

Basic criterion for assessment of achieved research results will be that how the completed project contributed to meeting economical, ecological and social expectations and to utilisation of research and technological opportunities. Besides of the mentioned criteria the professional level of research work will no less be considered as well.

After completion of all projects included in the NRP, it means in the first half of 2010, the Ministry of Education, Youth and Sports shall submit a report on assessment of completed NRP to the Government. The Ministry of Education, Youth and Sports shall elaborate the report on the basis of reports and other information required from individual programme providers. Final assessment will be carried out according to analogous criteria as a continuous assessment.

5. Co-ordination and Management

National Programme as a whole will be co-ordinated by the Ministry of Education, Youth and Sports through the Council of National Research Programme. Steering bodies will be also established on the individual provider level. The providers shall invite tenders for individual parts of topical (thematic) and cross-sectional programmes.

The Ministry of Education, Youth and Sports (MEYS) is a central administrative body responsible for the NRP. It manages it methodically, issues rules, prepares documents necessary for uniform NRP management and implementation. It submits proposals on the NRP priorities to the Government, new topical and cross-sectional NRP programme proposals and

their budgets, report on the NRP assessment, information on meeting goals and on achieved results, proposals on the NRP changes and the new NRP draft. In doing so it co-operates with providers of individual parts of topical and cross-sectional programmes and with Research and Development Council, which according to the Act No. 130/2002 Coll. on the Research and Development Support takes a stand on all papers being submitted to the Government. Apart of a co-ordination role the MEYS plays also a part of one of providers.

Provider is responsible for management and financing of appropriate entrusted part of topical or cross-sectional programme and has competency to conclude agreements on providing support or of issuance of decision on/for providing support. Provider's obligations are set by the Act on the Research and Development Support.

Establishment of expert advisory bodies for assessment of the research project drafts being submitted within the tenders for individual sub-programmes belongs to its tasks.

The MEYS has set up the NRP Council as its expert advisory body. Proposing the NRP mission and objectives, the new NRP programme drafts, proposing providers to individual NRP parts and proposing distribution of specific support for individual NRP parts belongs to the task of the Council. In further phases it is evaluation of the NRP objective meeting, topical and cross-sectional NRP, drawing up the report on the NRP assessment for the MEYS and preparation of the new NRP. It is dealing also with proposals of unified forms and other materials for evaluation and administrative assurance of the NRP and its parts. It elaborates for the MEYS the standpoints to the documents of individual project participants.

Central administrations fulfilling the role of providers of individual NRP parts, University Council, Czech Rectors Conference, Academy of Sciences of the Czech Republic, Association of Research Organisations as well as unions and associations related to research will be represented in the NRP Council.

The project assessment is based on estimation of the achieved result utilisation in future. This principle ensures choice according to the importance, feasibility and results utilisation.

The NRP main objective, which shall be announced for the period 2004 – 2009, is elimination of existing disintegration of system of the oriented research support and setting up framework for organised, goal-oriented and purposeful support of selected projects that have the best chance to contribute to economic development of the Czech Republic and improvement of the life quality of its inhabitants.

The above-mentioned proposal on the competency distribution for co-ordination and financing goes beyond the scope of standing custom in the Czech Republic however it gets closer to the systems applied basically in all OECD member states. Great national research and development programmes are co-ordinated and financed in these countries as a rule by one, maximum two ministries. The proposal is strengthening the research and development policy importance and creates preconditions for unification of different co-ordination methods for the existing research programmes. The proposal in addition facilitates the Czech Republic participation in creating and development of the European Research Area.

The NRP management system is dependent on several professional and international factors. The most important factor is in particular necessity of the NRP harmonisation with the Act No. 130/2002 Coll. on the Research and Development Support. It is necessary to ensure that the research supported by state meets our society's and economic needs and that its results are put

into practice as flexible as possible. In addition it is necessary to eliminate excessively broad spectrum of research goals and disintegration of financial means related to that and focus the research on the selected project solution. Last but not least it is necessary to define goal-oriented phases of research activity for achievement of the best usable results. The international factors that must be taken into account are in particular forthcoming entry of the Czech Republic into the European union. In connection with that the foreign subject participation in the NRP is enabled.

6. International co-operation in the NRP

The international co-operation in the research and development is created as long-term concept leading to the country development and prosperity. This co-operation is being developed in form of the EU framework programmes, multilateral inter-governmental co-operation and other multilateral and bilateral co-operation.

The Czech Republic is involved in number of international projects. There are activities as COST (co-operation focused on investigating and applied research), EUREKA (co-operation in the field of applied and industrial research), EU framework programmes, EMBC (European Molecular Biology Conference), NATO scientific programmes for civil research, INTAS (co-operation with previous USSR countries and Russia), Vishegrad initiative etc.

Integration in the EU research and development structures is main priority for the Czech Republic. The most important tools for organisation of research on European level are the EU framework programmes and therefore participation in these framework programmes forms basis of international co-operation. Thus at the present time the involvement in the 6th Framework Programme, which is setting the aim of creation of the European Research Area /ERA/ is the task of primary importance.

The candidate states have signed also declaration [1] to the Memorandum of Understanding between the European Communities and the Czech Republic to the 6th Framework Programme. This declaration represents obligation of candidate countries that they will open their research programmes of framework character also for research organisations from the European Community countries. This opening will be without making claim to financial contribution from the means of individual candidate countries. The ministers of candidate countries with competency for research and development have signed the Memorandum however its application in the Czech Republic needs the Parliament approval.

Creation of conditions for facilitation of the Czech Republic integration into the European Research Area is one of the NRP goals. The European Union in conformity with its follow-up negotiations and documents, first of all summit in Lisbon in 2000, and with preparation of the 6th Framework Research Programme and Technology Development strives for creation of conditions for keeping pace with the USA and Japan edge in the European research and development competitiveness.

[1] The whole title reads: "Declaration of the Czech Republic to the Memorandum of Understanding between the European Communities and the Czech Republic on Association of the Czech Republic to the Sixth Framework Programme of the European Communities for Research, Technical Development and Demonstration Activity contributing to Creation of European Research Area and Innovations (2002 – 2006) and to the Sixth Framework Programme of the European Community for Nuclear Energy and for Nuclear Research and Training Activities also contributing to Creation of the European Research Area".

Co-ordination of the research and development policy of individual EU member and associated countries is a tool for achievement of the USA and Japan level. Strengthening of co-operation among individual countries also outside framework programmes will form a component part of this co-ordination. One of forms being enforced is also opening of the national research and development programmes for participation of subjects from other member and associated countries.

The needs of the Czech society and economics and usability of results in the Czech Republic will be in particular taken into account for the foreign subject participation. The international co-operation shall not be obliged and it will not be the assessment criterion.

In the tender invitation and in agreement on providing support each provider shall determine the rights of foreign subjects participating in the project solution. The rights shall be related to the research results in relation to the means invested in the given project. By determination of these rights the provider shall act in accordance with legal regulations in force as well as in accordance with international obligations of the Czech Republic.

Requirement to open the national research programmes in candidate countries for the subjects from the European Communities is not a new one. In case of the Czech Republic the obligation has been mentioned already in July 1999. The Government has discussed in December 1999 the proposal on making accessible the national programmes and consent has been given to that.

It is envisaged that the National Research Programme will be open for the subjects from the European Communities from the time of its commencement, i. e. from the beginning of 2004.

Annex

The framework set of drafts of I–V thematic circles composed of priority R&D 1 themes for preparation of the National Research Programme II

I. Safe, reliable and ecological energy for the future	
1	Safe, reliable and ecological energy
2	Energy for the future
II. Information and knowledge-based society	
3	Information and knowledge-based systems for the society
4	Information support to the economic growth
5	Safe information environment
6	Informatics for health
III. Quality and safety of life	
7	Safe food and healthy nutrition
8	Non-traditional agriculture
9	Molecular and cellular basis of diagnostics and treatment
10	Genomic and proteomic approach to the study of gene functions in fundamental biological and biomedical processes
11	Diagnostics, treatment and prevention of infectious diseases
12	Protection of basic components of the environment
13	Environment and health
14	Waste
15	Technology and materials for clean production
16	Nature and country protection, biodiversity
17	More effective and safe transport
18	Sustainable development of construction and effective management of buildings
IV. New materials, processes and technologies	
19	New materials, structures and procedures for diagnostics and treatment
20	Progressive technical systems and their application
21	Chemistry for the society
22	Nanostructures and components for information and communication technologies
23	Methods and apparatuses for nanodiagnostics
V. Needs of the Czech Republic in the socio-economic area	
24	Social problems of the Czech society
25	Economic problems of the Czech society
26	Integration to EU
27	Human sources and education

¹ The thematic areas are sets of individual priority themes (1–27). The number of priority themes will be reduced further to approximately 15 during preparation of the draft National Research Programme II. In the mentioned draft the thematic areas will be concentrated into approximately three thematic programmes. This annex did not use the technical terminology for the structure of priorities to be understandable to the general public. Therefore the terminology used may differ from that applied within the research for the public administration made by the Technological Centre of the Academy of Sciences of Czech Republic.

Statute and Rules of Procedures

Council of the National Research Programme

(Approved by the Order of the Minister of Education, Youth and Sports No. 11/2003

Ref. No.: 26 760/2003-34 of 8 October 2003)

Article 1

Introductory Provisions

The Council of the National Research Programme (hereinafter the “Council”) is an advisory body of the Minister of Education, Youth and Sports (hereinafter the “Minister”) established with regard to

- a) § 33 clause 2a) to c) of the Act No. 130/2002 Coll. on the Research and Development Support from Public Funds and on the Amendment of certain related Laws (hereinafter the Act on the Research and Development Support),
- b) The Act No. 2/1969 Coll. on Establishment of Ministries and other Central bodies of the Czech Republic State Administration as amended by Subsequent Regulations (so-called The Act of Competency)
- c) Decree of the Government of 28 April 2003 No. 417 to the project of the National Research Programme (hereinafter the “NRP”).

Article 2

The Council Competency

The Council

(1) Provides the Ministry of Education, Youth and Sports (hereinafter the “Ministry”) with professional assistance by

- a) Suggestion of the NRP mission and objectives and its individual programmes;
- b) Co-ordination of individual NRP programmes;
- c) Preparation of proposal for distribution of the state budget specific expenditures for the NRP and its individual programmes and by suggestion of competence of the budget chapter administrators for execution of the provider’s duty for individual NRP programmes;
- d) Evaluation of the NRP objective meeting as a whole and its individual programmes implemented within competence of appropriate providers;
- e) Preparation of a new NRP proposal;
- f) Elaboration of standpoints to the providers documents;
- g) Assessment of the NRP programmes according to the ethical and moral principles recognised by the international scientific community also from the point of view of relation to the international agreements to which the Czech Republic is bound or conventions prohibiting research and development of some products, methods and techniques;

(2) Fulfils other tasks set by the Minister.

Article 3

The Council Composition and Membership

The Council consists of altogether 17 members – The Chairman of the Council, who is the Vice-Minister for science and universities and 16 appointed Council members who are appointed by the Minister from the persons proposed by the

- a) Providers and other appropriate central administrative bodies;
- b) Representatives of persons acting in the field of research and development;
- c) Representatives of users of the research and development results in industrial and other practice.

(2) Terms of office of individual appointed Council members are two years. The same person could discharge his/her function of the Council member not more than two consecutive terms of office.

(3) The Council membership is not substitutable.

(4) The Council Membership terminates by

- a) Expiration of the Terms of office;
- b) Removal by the Minister on the proposal of the Chairman of the Council;
- c) Resignation at his/her own request;
- d) Incapacitation or limitation of legal capacity;
- e) Lawful sentence for premeditated criminal act;
- f) Death.

Article 4

The Chairman of the Council

(1) The Chairman of the Council leads the Council.

(2) The Chairman of the Council

- a) Is in the chair of the Council negotiations according to the Article 9;
- b) Appoints rapporteurs for individual discussing materials;
- c) Co-ordinates implementation of individual NRP programmes in co-operation with the provider representatives;
- d) Submits reports on the NRP evaluation to the Ministry;
- e) Transmits all documents on the NRP and its programme evaluation to the Ministry.

(3) In absence of the Chairman of the Council the Vice-Chairman of the Council fulfils the tasks according to the clause 2.

Article 5

Vice-Chairman of the Council

(1) Solely Vice-Chairman of the Council could deputise for the Chairman of the Council in his/her activity.

(2) The Minister shall appoint the Vice-Chairman of the Council on the proposal of the Council emerging from the Council members. The Minister could also remove the Vice-Chairman of the Council from his/her duty.

Article 6

Secretariat of the Council

(1) Secretariat of the Council shall ensure the Council activity organisationally, administratively, materially and technically.

(2) Ministry's Department of the Research Policy and its Implementation shall fulfil duty of the Secretariat of the Council.

Article 7

Secretary of the Council

The Secretary of the Council is an officer of Ministry's Department of the Research Policy and its Implementation responsible for administrative activities related to the Council task fulfilment.

Article 8

Rapporteur

The Rapporteur is the Council member to whom the Chairman of the Council has assigned the documents for elaboration of the opinion proposal for the Council negotiations in conformity with the Rapporteurs' professional orientation.

Article 9

The Council Negotiations

(1) The Chairman of the Council shall convene the Council session on initiative of the Council or the Ministry.

(2) The Chairman of the Council could designate a rapporteur for discussion of particular material. The Council shall then consider on its session the draft resolution prepared by the rapporteur. The same rapporteur could prepare proposals to more papers.

(3) The Council shall have a quorum if absolute majority of its members is present. The draft resolution should be adopted if absolute majority of the Council members present has voted in favour of it. In case of the same numbers of vote the Chairman's of the Council vote shall be decisive.

(4) In addition to the Council members the following persons shall have right to attend its session however without voting rights:

- a) Secretary of the Council;
- b) Specialists invited in case of need by the Chairman of the Council as observers who shall be in an advisory capacity;

- c) Employees of the Czech Republic acting in the Ministry by discharging of their functions designated by the Chairman of the Council.

(5) On the basis of source materials the Council shall compile a minutes containing particularly final resolution, signature of the Chairman of the Council, date, list of participants, in case of voting the record on its result and possible statement of the Council members to the final resolution.

(6) Each participant in the Council sessions has right to include his/her point of view in the minutes. Objections that are indicated as a discrepancy shall be stated in the minutes.

(7) The Ministry shall provide administrative, organisational and other arrangement for the Council sessions through the Secretariat of the Council.

Article 10

Assessment of the Objective Meeting and of the NRP Achieved Results

(1) The documentation approved by the Council containing binding objectives approved by the Government, parameters of expected results and the NRP assessment criteria, providers reports on the NRP programme assessment and on the achieved results and other submitted documentation shall form a basis for assessment by the Council of objective meeting and the NRP achieved results.

(2) The Chairman of the Council in co-operation with the Council members shall draw out the report on the NRP assessment.

(3) The report on the NRP assessment shall compare method and results achieved by all programmes with the NRP assignment and in particular with its goals and mission. Evaluation of results achieved within the programmes elaborated by the Councils of the NRP programmes shall form a component part of the report.

(4) The Process assessment of the result utilisation achieved within the NRP programmes shall form separate part of the report on the NRP assessment.

(5) The report on the NRP assessment shall be elaborated once in two year during the NRP implementation. Final report on the NRP assessment shall be elaborated always after completing of the NRP implementation.

(6) The Council shall transmit elaborated report on the NRP assessment to the Minister who shall submit it to the Government.

Article 11

Information Protection

(1) Protection of confidential information particularly personal data as well as providing of information on programme drafts or projects, on programmes or projects being solved and their results is governed by the Act on the Research and Development Support and by other legal regulations.

(2) The Council members and other persons participating according to this Statute in the Council activities, by which they could come into contact with protected information, shall undertake by written declaration an obligation to maintain secrecy on data, which

- a) Are contained in the documents having been submitted to the Council by the Ministry, provider, applicant or receiver or
- b) Relates to the consideration of documents by the Council.

(3) Except of otherwise stated in the Statute the obligation to maintain secrecy is continuous.

(4) All documents and material in any forms containing protected information and lent to the Council shall be returned to the Ministry for keeping or shredding. Solely the Secretary of the Council or other employees of the Czech Republic working in the Ministry and designated by the Minister could make copies of such documents.

Article 12

The Council Advisory Bodies and Working Groups

- (1) The Council could set up advisory bodies and working groups for fulfilment of its task.
- (2) Membership in advisory bodies and working groups is not consistent with the Council membership.
- (3) Advisory bodies and working groups could be established as permanent or temporary bodies for fixed period to fulfil specific task.

Article 13

The Council Advisory Bodies

- (1) The Council advisory bodies are the Council expert committees (hereinafter the “expert committee”).
- (2) The expert committee shall be set up to prepare the expert, prognostic and conceptual statements for the Council. The expert committee shall be established for the period of four years unless otherwise stated by the Council.
- (3) The Chairman of the Council shall appoint the expert committee members and remove them from the duty.
- (4) The expert committee has not more than 12 members. The Council shall determine the number of the expert committee members and their term of office.
- (5) The expert committee shall work independently and separately. The chairman of the expert committee appointed by the Chairman of the Council shall be in its chair and shall be responsible for it.
- (6) The Council shall charge the expert committee with tasks through rapporteur, who shall transmit the set up tasks to the chairman of the expert committee. The chairman of the expert committee shall hand over its results of work to the Council through the rapporteur.

Article 14

The Council Working Bodies

- (1) The Council working bodies are working groups of the Council (hereinafter the “working group”).
- (2) The Council could set up a working group for elaboration of source materials provided that their compilation does not fall within competence of advisory bodies.
- (3) The Chairman of the Council shall appoint and remove the working group members. The Chairman of the Council shall decide in compliance with the task character whether the Council or the Ministry shall propose appointment of the working group members including its chairman.
- (4) The chairman of the working group appointed by the Chairman of the Council shall be in its chair and shall be responsible for it.
- (5) The Council shall charge the working group with tasks through rapporteur, who shall transmit the set up tasks to the chairman of the working group. The chairman of the working group shall hand over its resulting material to the Council through the rapporteur.

Article 15

Invited Specialists

- (1) For solution of selected tasks the Chairman of the Council or the chairman of the Council’s advisory body or working group could ask the Ministry to ensure co-operation with natural persons, who are specialists for selected issues. The specialists could be invited to the Council session or its advisory body or working group.
- (2) Invited specialists could elaborate an expert statement or expert opinion for the Council or its advisory body or working group.

Article 16

Final Provisions

The Statute and the Rules of Procedure shall come into effect on the date of their approval by the Minister.

National Research and Development Policy of the Czech Republic

National Research Programme

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